	Type	Hits	Search Text
1	BRS	2	"6749648".pn.
2	BRS	2574	429/231.3,224.ccls.
3	BRS	3628	427/122-124.ccls.
4	BRS	1	10/827,072
5	BRS	1	S12 and ("100" adj nm)
6	BRS	113	nanogram.as.
7	BRS	1	S12 and (laser adj pyrolysis)
8	BRS	30	S15 and (lithium adj3 oxide)
9	BRS	11	S17 and @ad<"20000620"
10	BRS	11	S18 and (particle with nm)
11	BRS	2408	(lithium adj2 cobalt adj2 oxide)

	DBs
1	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT
2	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT
3	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT
4	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT
5	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT
6	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT
7	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT
8	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT
9	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT
10	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT
11	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT

	Type	Hits	Search Text
12	BRS	1	S20 and cobalt
13	BRS	22	S25 and @ad<"20000620"
14	BRS	9	(lithium adj3 oxide) and S27
15	BRS	11	S18 and battery
16	BRS	2	"6638662".pn. and (positive adj electrode)
17	BRS	129	S23 and S24
18	BRS	1	"li.sub.2comno.sub.4"
19	BRS	61539	particle with (size diameter) with nm
20	BRS	1	S20 and (lithium adj2 cobalt adj2 oxide)
21	BRS	1	"li.sub.2conio.sub.4"
22	BRS	2	S45 and "148"/$.ccls.

	DBs
12	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT
13	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT
14	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT
15	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT
16	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT
17	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT
18	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT
19	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT
20	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT
21	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT
22	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT

	Type	Hits	Search Text
23	BRS	2	"5589300".pn.
24	BRS	1	"li.sub.2coalo.sub.2"
25	BRS	885	S24 and hitachi.as.
26	BRS	5	li adj ni adj co adj o
27	BRS	2	"6274271".pn.
28	BRS	2	"5520903".pn.
29	BRS	1	S34 and size
30	BRS	2	"6127065".pn.
31	BRS	191	lithium adj2 nickel adj2 cobalt adj oxide
32	BRS	132	hard$1working
33	BRS	2	"4770960".pn.

	DBs
23	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT
24	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT
25	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT
26	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT
27	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT
28	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT
29	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT
30	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT
31	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT
32	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT
33	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT

	Type	Hits	Search Text
34	BRS	26	S42 with al with mn
35	BRS	1779	lithium adj2 cobalt adj oxide
36	BRS	2	"5589300".pn.
37	BRS	2	S43 and @ad<"20000620"

	DBs
34	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT
35	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT
36	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT
37	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT

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=> s (laser pyrolysis)
        558433 LASER
        169501 LASERS
        572866 LASER
                  (LASER OR LASERS)
         90146 PYROLYSIS
             1 PYROLYSISES
         90146 PYROLYSIS
                  (PYROLYSIS OR PYROLYSISES)
L1         662 (LASER PYROLYSIS)
                  (LASER(W)PYROLYSIS)

=> s l1 and (lithium (4w) oxide)
        324898 LITHIUM
           369 LITHIUMS
        325025 LITHIUM
                  (LITHIUM OR LITHIUMS)
       1765582 OXIDE
        344668 OXIDES
       1863111 OXIDE
                  (OXIDE OR OXIDES)
         45971 LITHIUM (4W) OXIDE
L2           4 L1 AND (LITHIUM (4W) OXIDE)

=> d l2 abs ibib 1-4

L2   ANSWER 1 OF 4  CAPLUS  COPYRIGHT 2007 ACS on STN
AB   Metal oxide particles are prepared by laser pyrolysis
     having an average particle sizes of ≤ 500 nm, preferably ≤ 50
     nm.  ≥ 95% Of the particles have a particle diameter ≥ 60% of
     the average diameter and ≤ 140% of the average diameter  The particles can be
     used to manufacture cathodes, especially for secondary lithium batteries.
ACCESSION NUMBER:         2004:509070  CAPLUS
DOCUMENT NUMBER:          141:26211
TITLE:                    Preparation of metal oxide nanoparticles by
                          laser pyrolysis and their use as
                          cathode material in batteries
INVENTOR(S):              Kumar, Sujeet; Reitz, Hariklia Dris; Horne, Craig R.;
                          Gardner, James T.; Mosso, Ronald J.; Bi, Xiangxin
PATENT ASSIGNEE(S):       USA
SOURCE:                   U.S. Pat. Appl. Publ., 58 pp., Cont.-in-part of U.S.
                          Pat. Appl. 2003 198,590.
                          CODEN: USXXCO
DOCUMENT TYPE:            Patent
LANGUAGE:                 English
FAMILY ACC. NUM. COUNT:   30
PATENT INFORMATION:

     PATENT NO.           KIND   DATE        APPLICATION NO.          DATE
     ---------------      ----   --------    --------------------     --------
     US 2004120882         A1    20040624    US 2003-655322           20030904
     US 6607706            B1    20030819    US 1998-188768           19981109
     US 6482374            B1    20021119    US 1999-334203           19990616
     CN 1531480            A     20040922    CN 2001-820305           20011026
     US 2003044346         A1    20030306    US 2002-271925           20021016
     US 2003198590         A1    20031023    US 2003-436772           20030513
PRIORITY APPLN. INFO.:                       US 1998-188768       A1 19981109
                                             US 1999-334203       A3 19990616
                                             US 2002-271925       B1 20021016
                                             US 2003-436772       A2 20030513
                                             US 2000-243491P      P  20001026

L2   ANSWER 2 OF 4  CAPLUS  COPYRIGHT 2007 ACS on STN
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AB Nanocryst. lithium transition metal oxides have been synthesized using a unique laser pyrolysis method commercialized by NanoGram Corporation for use in lithium rechargeable batteries. The nanocryst. lithium transition metal oxides synthesized include $Li_4Mn_5O_{12}$, $LiMn_2O_4$, $LiCoO_2$, and $LiNi_{0.8}Co_{0.2}O_2$. These powders display characteristics consistent with a high degree of crystallinity, sizes ranging from approx. 20 to 60 nm, and surface areas more than an order of magnitude higher than conventional, bulk lithium transition metal oxides used in lithium rechargeable batteries. These nanopowders can be engineered into composite porous electrodes with densities comparable to bulk powders. Results from cycling stability, rate capability, elevated temperature storage, and elevated temperature cycling tests indicate that the laser pyrolysis process yields nanocryst. materials with stabilities comparable to bulk materials.

ACCESSION NUMBER: 2002:818587 CAPLUS
DOCUMENT NUMBER: 138:26835
TITLE: Nanocrystalline lithium transition-metal oxides for lithium rechargeable batteries
AUTHOR(S): Horne, Craig R.
CORPORATE SOURCE: NanoGram Corporation, Fremont, CA, 94538, USA
SOURCE: Proceedings - Electrochemical Society (2001), 2000-21(Rechargeable Lithium Batteries), 1-7
CODEN: PESODO; ISSN: 0161-6374
PUBLISHER: Electrochemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
REFERENCE COUNT: 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L2 ANSWER 3 OF 4 CAPLUS COPYRIGHT 2007 ACS on STN

AB Metal vanadium oxide particles have been produced with an average diameter less than about 500 nm. The metal vanadium oxide particles have very uniform properties. In some embodiments, silver vanadium oxide particles are formed by the heat treatment of a mixture of nanoscale vanadium oxide and a silver compound Other metal vanadium oxide particles can be produced by similar processes. In other embodiments, laser pyrolysis is used to produce directly metal vanadium oxide composite nanoparticles. To perform the pyrolysis a reactant stream is formed including a vanadium precursor and a second metal precursor. The pyrolysis is driven by energy absorbed from a light beam. Metal vanadium oxide nanoparticles can be incorporated into a cathode of a lithium based battery to obtain increased energy densities. Implantable defibrillators can be constructed with lithium based batteries having increased energy densities.

ACCESSION NUMBER: 2000:553811 CAPLUS
DOCUMENT NUMBER: 133:137867
TITLE: Metal vanadium oxide particles for batteries
INVENTOR(S): Horne, Craig R.; Reitz, Hariklia Dris; Buckley, James P.; Kumar, Sujeet; Fortunak, Yu K.; Bi, Xiangxin
PATENT ASSIGNEE(S): Nanogram Corporation, USA
SOURCE: PCT Int. Appl., 114 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 30
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000046867	A1	20000810	WO 2000-US2653	20000202
W: CN, JP, KR				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				

US 6225007	B1	20010501	US 1999-246076		19990205
US 2001046468	A1	20011129	US 1999-311506		19990513
US 6391494	B2	20020521			
EP 1163703	A1	20011219	EP 2000-905921		20000202
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI					
JP 2002536286	T	20021029	JP 2000-597850		20000202
CN 1531480	A	20040922	CN 2001-820305		20011026
PRIORITY APPLN. INFO.:			US 1999-246076	A	19990205
			US 1999-311506	A	19990513
			WO 2000-US2653	W	20000202
			US 2000-243491P	P	20001026

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L2 ANSWER 4 OF 4 CAPLUS COPYRIGHT 2007 ACS on STN

AB Manganese oxide particles and lithium manganese oxide particles with an average diameter of <500 nm are manufactured by reaction(e.g., laser pyrolysis) with an aerosol containing metal precursor.

ACCESSION NUMBER: 2000:335333 CAPLUS
DOCUMENT NUMBER: 132:349753
TITLE: Metal oxide particles
INVENTOR(S): Kumar, Sujeet; Bi, Xiangxin; Horne, Craig R.; Hariklia, Dris Reitz; Gardner, James T.; Mosso, Ronald J.; Kambe, Nobuyuki
PATENT ASSIGNEE(S): Nanogram Corporation, USA
SOURCE: PCT Int. Appl., 138 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 30
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000027754	A1	20000518	WO 1999-US26343	19991108
W: CA, CN, JP, KR				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
US 6506493	B1	20030114	US 1998-188770	19981109
US 6607706	B1	20030819	US 1998-188768	19981109
US 6136287	A	20001024	US 1998-203414	19981202
US 6482374	B1	20021119	US 1999-334203	19990616
CA 2350201	A1	20000518	CA 1999-2350201	19991108
EP 1165442	A1	20020102	EP 1999-957527	19991108
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
JP 2002529352	T	20020910	JP 2000-580940	19991108
CN 1531480	A	20040922	CN 2001-820305	20011026
PRIORITY APPLN. INFO.:			US 1998-188768	A 19981109
			US 1998-188770	A 19981109
			US 1998-203414	A 19981202
			US 1999-334203	A 19990616
			WO 1999-US26343	W 19991108
			US 2000-243491P	P 20001026

REFERENCE COUNT: 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

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